Missouri Department of Natural Resources
Nonpoint Source Implementation (319) Grant
Application Checklist
FY2006-2007

Applications for funding under Section 319 of the Federal Clean Water Act, for Fiscal Years 2006-2007, must be postmarked to the Missouri Department of Natural Resources (DNR) no later than June 19, 2006. Mail to:

Missouri Department of Natural Resources
Water Protection Program
Watershed Protection Section
Attn: Greg Anderson
P.O. Box 176
Jefferson City, MO 65102

Applicants must submit 20 copies of the application packet. The packet must include the following:

1. Completed and signed application form. Use only the form provided by DNR.
2. Copy of 501(c) documentation, if applicable. (Item 4 on application form.)
3. Expanded budget. (Item 12 on application form.)
4. Legible map of the watershed, showing the area to be addressed by the project. (Item 16 on application form.)
5. Letters of support, if applicable. Letters should indicate the partner's intended contribution to the project. (Item 26 on application form.)

Missouri Department of Natural Resources
Nonpoint Source Implementation (319) Grants
APPLICATION INSTRUCTIONS

Applications must be typed and submitted on the attached application form or a copy of this form. All blank spaces must be completed. Enter "N/A" for any item that does not apply. Do not add or delete any pages or parts of the application form. Due to the limited time available during the application review process, please check that your application is complete and concise or it may be returned to you for more information. Do not feel obligated to fill the entire space provided for each item.

Each item in the application is numbered. Numbers correspond to the instructions below:

1. State the name of the project. The name should be brief, but clearly identify the type of project.

2. List the name of the sponsoring organization. If it is a public agency, include the name of the branch, section, division or office as appropriate.

3. Enter the mailing address of the sponsoring organization.

4. Provide the sponsoring organization's tax payer identification number. If the entity has 501(c)(3) status, include that documentation as an attachment to your application.

5. Indicate the organizational type that best describes the sponsor.

6. State the name, address, affiliation, telephone number, fax and e-mail address of the individual most familiar with the project proposal and able to respond to questions about the project application. List only one (1) contact person.

7. Indicate (month, day and year) the expected start and end dates of the project. The target date for beginning projects should be no earlier than one year after the due date of the application. The length of your project should not exceed 4 years.

8. Identify the watershed in which the project will take place. Name the river, lake or other water body, that will be affected by the proposed project. In addition, provide the 8-, 11- or 14-digit hydrologic unit code. The code can be obtained from the local Soil and Water Conservation District office or at http://maproom.missouri.edu/atlas.html

9. Project cost for 319 funds requested, match funds and other contributions should match the total in the Budget (#17). The required minimum match can be calculated as follows: 40 divided by 60 times the requested federal amount. Please check your calculations! *Remember to show nonfederal support in a ratio of at least 40 percent nonfederal to 60 percent federal 319 funds.*

10. An authorized representative of the sponsoring organization MUST sign and date the original application and include his or her telephone number.

11. Budgets should be realistic and complete for the life of the project. Budgets for approved projects may be adjusted later between categories and components as further planning dictates. There will not, however, be any later increases to the total award. Remember to show nonfederal support in a ratio of at least 40 percent nonfederal to 60 percent 319 federal grant funds. In other words, for every $60 of 319 money in the project, a minimum of $40 nonfederal money must be contributed to the project. However, these matching funds can be provided by in-kind activities such as volunteer time or donated supplies. See Attachment A for more information on issues related to matching funds. See Attachment B for examples of the types of items to include in each of the budget categories.

    Any proposed equipment purchases must be itemized. Equipment that costs less than $5,000 per item should be classified as supplies.

    If the sponsor receives more than $300,000 per year in federal grant funds, funds to support annual audits may be included in a proposal.

    If you expect your project to have more than $25,000 in expenditures per year, you should include costs for hiring an outside, qualified accounting firm to manage record keeping. The requirement for outside accounting management may be waived, subject to DNR review and approval of staff accounting credentials.

    If your project includes costs for environmental montoring, a quality assurance project plan (QAPP) is required. Preparation and DNR's approval of a QAPP is required prior to reimbursement of any costs incurred for montoring activities falling under these requirements. Time for development of the QAPP can be charged to the project only after an award has been signed by DNR and the sponsoring organization.

    Project signs at demonstration sites are required, so budget accordingly.

12. Attach two separate detailed budgets – a Detailed Budget by Category and a Detailed Budget by Activity. The Detailed Budget by Category should include details related to the budget categories included in #11 (i.e., the federal budget categories such as personnel and contractual). The Detailed Budget by Activity should describe the cost per activity within the project. See Attachment C for examples of both types of detailed budgets.

13. Determine if your project is a Clean Lakes activity or classified lake or reservoir and indicate the type of activity. Lake protection and restoration activities may be considered Clean Lakes projects. LWQA is a Lake Water Quality Assessment Project. Phase I is a diagnostic/feasibility study. Phase II is the restoration/implementation project. Phase III is post-restoration monitoring study. See the Request for Proposal (RFP) for detailed information.

14. Indicate whether your proposed project will address waters on the 303(d) list. If so, include the relevant information from the list (category, water, etc.) or attach a copy of the appropriate section of the list. See Attachment H for a list of waters impaired by nonpoint sources.

    Use of the 303(d) list for prioritization is not intended to eliminate potentially worthwhile projects. If your watershed is not included in the listing, describe briefly your reasons for considering it a priority. Include details of nonpoint source impacts or threats in the watershed.

15. Indicate whether or not a Watershed Management Plan has been completed, when it was completed using the Key Elements (see Attachment F), and by whom.

16. Identify the project location. On a legible map, outline your watershed and include it as part of your application.

    Provide relevant information concerning the project size, geographic settings, landowners, land use and other characteristics that affect the project. Quantify, if possible, cropland, timber, publicly owned areas, farmsteads or landowners, urban or other uses. Provide general information on soils, climate conditions, geologic characteristics, percent impervious area in urban projects, typical cropping patterns, management practices and existing best management practices. If any related projects or activities are occurring in the watershed, describe those and their relationship to the proposed project.

17. Describe the water quality problem in detail. Identify all of the nonpoint source water quality problems in the watershed. Note specific examples of existing and/or historical conditions that have resulted in water quality degradation. Discuss the in-stream or in-lake problem (e.g. low dissolved oxygen, sedimentation, aquatic habitat degradation, high levels of pesticides or nutrients, etc.) and describe the watershed conditions responsible for these water quality problems (e.g. sheet/rill erosion, stream bank erosion, runoff of farm chemicals and nutrients from crop fields, degradation of riparian zones by livestock, urban runoff from land disturbance activities, etc.). Include references to any available documentation.

    Livestock information for the project area should be quantified as completely as possible by type and number, existing facilities, permitted animal wastes facilities, animal waste storage and handling methods, waste land application methods and rates.

    Critical areas or problems that have a major impact on the waterbody should be identified. For example, areas with high sediment delivery, livestock access to water resources, intensively cropped land in close proximity to the water resource or urbanizing influences such as increased runoff and pollutants associated from large pavement areas.

    For non-agricultural sources indicate industrial sources of pollution and impacts of urban or residential areas on water quality.

18. Please list all pollutants that will be addressed during the project. If the pollutant addressed is sediment or nutrients, a method to quantify load reduction must be used. Acceptable methods may include RUSLE (for sediment), STEPL or another approved models (refer to #8, Application Criteria in the RFP). Nonpoint source staff will work with applicant to select the most appropriate method.

19. List the nonpoint source category and subcategory impacted. See Attachment D for a list of categories.

20. List the Functional category of the activity. See Attachment E for a list of categories. Indicate whether or not your proposal is a restoration project addressing the pollutant impacting the waterbody from the 303(d) list.

21. Briefly describe the water quality problem(s), project plan, objectives, products, methods employed, and partnerships in the executive summary. * "Methods employed" is used to describe the approach selected to address or correct the problems(s), such as educational program, types of best management practices (BMPs) installed and the anticipated life of those practices.

22. Describe what the project is going to do to address the water quality problems identified in #21. Identify concrete, measurable targets to be achieved for the watershed. State the roles and responsibilities of all organizations or agencies involved in the project. Be concise. Include what your organization plans to do to continue the project after the grant has expired. This is an extremely important part of the application! Be sure to clearly answer the questions, "What are you going to do?" "How you will spend the money?" "Who will do the work?" "What are the goals of the project?" "How will nonpoint source pollution be reduced or addressed by the end of the project?" Describe why this approach should be effective.

    The project objectives are overall goals to have been achieved by the end of the project. They are not the activities undertaken to reach those goals.

    Objectives should reflect what can realistically be accomplished within the time frame of the proposed project. Examples of project objectives include: Reduce nitrogen application rates on corn acres by 25 percent; Control livestock access on 50 percent of the stream corridor; Restore 2 miles of riparian corridor; Increase pervious area in an urban area by 5%; Provide information transfer to 75% of people in the watershed.

23. List in chronological order tasks to be accomplished, project completion dates and which participant(s) are responsible for completion. Designations such as "Month 2" or "3rd quarter" are acceptable. If your proposal is accepted, changes may be made prior to implementation. Include in the schedule a meeting with DNR project management staff and a commitment to provide quarterly, annual and final reports to DNR. If someone other than the sponsor is responsible for a task, it is essential to include a written commitment from that entity with the application.

24. Describe the method to be used for evaluating success of the project. Describe the proposed monitoring activities both for water quality and other activities such as changes in land use, changes in use of specific management practices, public outreach activities, etc. Explain why this data is needed and the intended use of this data.

    Information/education projects should contain a description of instructional evaluation measures such as pre- and post-surveys that measure knowledge transfer or behavior changes.

    For other projects, intensive water monitoring may be used to measure the success of the project if it is comprehensive enough to show water quality improvements or trends. Normally, this requires the existence of pre-project baseline data. A Quality Assurance Project Plan (QAPP) will have to be developed for the project if monitoring is to be done. DNR staff will assist your project with developing this document.

    Alternative measures of success may be more practical. Examples of measures that may be used are: before and after photographs, length of streambank stabilized, acres of habitat restored, structures completed, behaviors changed, quantity of nutrients or chemicals not applied or manure properly managed, BMPs implementation tracking, or change of attitude from survey results.

    Volunteer monitoring may be established as a part of the project. The parameters sampled can provide some trend data. Contact DNR's volunteer monitoring coordinator at (573) 751-6623 for assistance.

25. List the products that will be produced as a result of the project, such as publications, field days, workshops, news releases or other outreach efforts, QAPP, water quality data, water quality improvements, BMPs applied, etc. The products should be quantified as much as possible and should be realistic. Products must result in water quality improvement. Those projects that result in continued water quality benefits after the life of the project are most desirable. A QAPP is a required product for projects conducting sampling. Be sure to indicate quarterly, annual and final reports as products; they are required of all projects.

26. Describe how interested and affected individuals have been involved in the design of the project. Show how the public has been and will be involved in implementation of the project. For watershed and other appropriate projects, an advisory group or steering committee should be formed to review progress and provide local direction and assistance. Describe the educational/outreach activities as well as plans for communicating lessons learned to other areas of the community, watershed, county or state.

Excerpts from Federal Grants Management Handbook
February 1995

Costs Allowable for Matching and Cost Sharing

Using any non-federal sources or program income if permitted by the grant terms and conditions can fulfill cost sharing requirements. Unless authorized by legislation, regulations or the award agreement, costs used to satisfy a grantee's matching requirement may not be derived from federal grants of subgrants from other programs or costs used as match or cost sharing on other grants.

If a cost is related to two or more grants it can be pro-rated among the grants. Any expenditure charged to an approved budget consisting of federal and non-federal shares is considered to be derived from the grant in the same proportion as the percentage of federal/grantee participation (matching ratio) in the overall budget.

Neither grantee-incurred costs nor third-party in-kind contributions count toward satisfying matching or cost-sharing requirements unless the grantee's records can verify them.

Sources of Rules Governing Valuation of Costs

Rules governing the valuation of costs stem from two sources. For grantee-incurred costs, the applicable cost principles govern. For third-party in-kind contributions the rules below apply.

Grantee in-kind contributions are valued as any other grantee cost in accordance with the cost principles whether or not they require a cash outlay; grantee in-kind contributions must be an allowable cost to be counted toward the project.

Third-party in-kind contributions, on the other hand, do not represent a cost to the grantee and must be valued according to the following rules.

Standards for Third-Party In-Kind Contributions

Third-party in-kind contributions must be:

1. Necessary to accomplish program activities; and
2. Allowable if the grantee was required to pay for them. (A third-part in-kind contribution of entertainment, for example, would not count because it would not be allowable if the grantee had incurred the cost.)

Simply stated, the rule for valuation of third-part in-kind contributions is "what it would have cost if the grantee had paid for the item or service itself." Several rules apply to valuation of third-party in-kind contributions, which are described below.

- *Volunteer Services*. Services provided to a grantee by volunteers are valued at rates consistent with those paid by the grantee to its employees performing similar work. If the grantee does not have employees performing similar work, the applicable rates are those paid by other employers for similar work in the labor market in which the grantee competes for services. In either case, a reasonable amount of fringe benefits may be included in the valuation.
- *Employees of other organizations*. When an employer other than the grantee furnishes at no cost the services of an employee, these services are valued at the employee's regular rate of pay, provided they are in the same line of work for which the employee normally is paid. The employer's overhead costs cannot be made part of the valuation.

Federal rules diverge as to whether fringe benefits can be included in the valuation, depending on the nature of the grantee organization. The government-wide common rule for state and local government grant administration prohibits the inclusion of the employee's fringe benefits. However, OMB Circular A-110 permits the inclusion of fringe benefits that are reasonable, allowable and allocable.

If the services to be provided by the "lent" employee are in a different line of work, then the rules for volunteer services apply. In either case, donated services are valued at the rate for "similar work." Therefore, if a doctor volunteers to drive a bus on weekends for a grant-supported program, his time would be valued at the rate of a bus driver, not a doctor. If, on the other hand, he donates necessary medical services to the project, his time would be valued at the rate of a doctor.

- *Donated supplies and loaned equipment or space*. If a third party donates supplies, the contribution is valued at the market value of the supplies at the time of donation. If a third party donates the use of equipment or space in a building but retains title, the contribution is valued at the fair market rental value of the equipment or space.
- *Donated equipment, buildings and land.* If a third party donates equipment, buildings or land, and the title passes to the grantee, the amount that is allowable for purposes of cost sharing or matching depends on whether the grant is for capital or operating expenditures.
- *Grants for capital expenditures.* If the purpose of the grant is to assist the grantee in acquiring equipment, buildings or land, the total market value of the property at the time of donation may be claimed.
- *Grants for current operations*. If the purpose of the grant is to support activities that require the use of equipment, buildings or land, cost sharing or matching cannot be claimed for the donated land, nor can the donated equipment or building be treated as third-party in-kind contributions. Instead, depreciation or use allowances based on the market value of the donations are allowable costs incurred by the grantee. Such depreciation or use allowance is determined and allocated according to the cost principles in the same manner as depreciation or use allowances for property purchased by the grantee and therefore is usually treated as indirect costs.

If the federal grantor agency approves, the fair rental rate of the donated land and the full market value of the equipment or buildings at the time it is donated may be considered cost-sharing or matching as third-party in-kind contributions. Approval is given only if purchase of the equipment or building or actual rental of the land would have been approved as an allowable cost.

- *Appraisal of real property*. In some cases, the market value of land or a building of the fair rental rate of land or space in a building must be determined. As a precondition to allowability for cost-sharing or matching purposes, the federal agency may require that the market value or fair rental rate be determined by a certified real property appraiser (of by a representative of the U.S. General Services Administration, if available), and that the value or rate be certified by the responsible official of the grantee.
- *Records for third-party contributions.* The most common problem with third-party in-kind contributions is lack of documentation. Grantees should ensure that all third-party in-kind contributions are supported by documentation.
- The grantee records must show how it arrived at the valuation places on third-party in-kind contributions. For example, the quantity and allocability of volunteer services must be supported, the extent feasible, by the same methods that the grantee uses for its own employees performing similar services. If, for instance, a grantee's employees use a time clock, volunteers performing similar work must do the same.

Attachment B

Budget Guidance for Proposed Expenses and Match

The following items are listed as examples of the kinds of expenses to include in each budget category. Expenses are not limited to these items. Please call the Department at (573) 751-7428 for assistance if questions arise.

Salaries: For personnel compensated directly by the grant funds or used as match. If contracting with another entity to provide personnel, those expenses should be classified as Contractual.

Fringe: Cost of fringe benefits.

Equipment: List each item costing $5000 or more and price individually. Items costing less than $5000 are considered supplies.

Examples:	Office equipment	Office furniture
	Mechanical equipment	Technical equipment
	Tools	Computer equipment

Travel:

Examples:	Mileage	Meals
	Lodging	

Supplies: Individual supply items costing between $200 and $5000, such as furniture, should be listed individually.

Examples:	Printing supplies	Office supplies
	Photography supplies	Technical supplies
	Educational supplies	Seed and fertilizer
	Library materials	Housekeeping supplies

Other:

Examples:	Advertising	Software purchase
	Telephone charges	Prizes and awards
	Utilities	Meeting room rental
	Equipment maintenance, repair or usage	
	Vehicle Rentals	

Contractual:

Examples:	Legal, auditing and accounting services
	Professional and technical services
	Printing and binding
	Mailing services
	Photographic services

Attachment C

Detailed Budget by Category

Example Project

Project Budget Period xx/xx/xx - xx/xx/xx

Categories	hrs	Year 1		Year 2		Year 3		Year 4		Total	Total
		319	Match	319	Match	319	Match	319	Match	319	Match
Salary/Fringe											
Project Coordinator	1040	20,150		20,654		21,170		21,699		83,673	0
Intern	400	3,000		3,075		3,152		3,231		12,458	0
Sanitarian	60		1,313		1,345		1,379		1,413	0	5,450
Technician	44		961		985		1,010		1,035	0	3,991
MDC Staff	50		750		769		788		808	0	3,115
Media Consultant	20		150		154		158		162	0	624
Water Monitors-8	320		2,400		2,460		2,522		2,585	0	9,967
Clean-up Volunteers-30	90		675		692		709		727	0	2,803
Planting Volunteers-20	160		1,200		1,230		1,261		1,292	0	4,983
Educ. Volunteers-10	80		600		615		630		646	0	2,491
Planning Volunteers-20	320		2,400		2,460		2,522		2,585	0	9,967
Stabilization Volunteers-15	120		540		554		567		582	0	2,243
Total Salary/Fringe	**2704**	**$23,150**	**$10,989**	**$23,729**	**$11,264**	**$24,322**	**$11,546**	**$24,930**	**$11,835**	**$96,131**	**$45,634**
Travel (meals, lodging, mileage)		500	0	513	0	525	0	538	0	2076	0
Total Travel		**$500**	**$0**	**$513**	**$0**	**$525**	**$0**	**$538**	**$0**	**$2,076**	**$0**
Supplies											
Promotion supplies		100		100		100		100		400	0
Office supplies		150		150		125		125		550	0
Newsletter supplies		200		200		150		150		700	0
Demonstration supplies		300		300		300		300		1,200	0
Restoration supplies		400		400		400		400		1,600	0
Total Supplies		**$1,150**	**$0**	**$1,150**	**$0**	**$1,075**	**$0**	**$1,075**	**$0**	**$4,450**	**$0**
Contractual											
County Soil & Water District		21,135	38,025	21,663	38,976	22,205	39,950	23,223	40,949	88,226	157,900
Demonstrations		6,000	2,000	6,150	2,050	6,304	2,101	6,461	2,154	24,915	8,305
BMP costs			2,500	0	5,125		5,253		5,384	0	18,262
Total Contractual		**$27,135**	**$42,525**	**$27,813**	**$46,151**	**$28,509**	**$47,304**	**$29,684**	**$48,487**	**$113,141**	**$184,467**
Other											
Internet line charge		500		513		525		538		2,076	0
Telephone		360		369		378		388		1,495	0
Copying		500		513		525		538		2,076	0
Slide Presentation		100		0		0		0		100	0
Newsletters		2,000		2,050		2,101		2,154		8,305	0
Education Materials		500		513		525		538		2,076	0
Resource Center		100		0		0		0		100	0
Event Promotion		1,000		1,025		1,051		1,077		4,153	0
Trees		330		338		347		355		1,370	0
Coliform Analysis		512		525		535		551		2,123	0
Watershed Awards		100		103		105		108		416	0
Total Other		**$6,002**	**$0**	**$5,949**	**$0**	**$6,092**	**$0**	**$6,247**	**$0**	**$24,290**	**$0**
Total Costs		**$57,937**	**$53,514**	**$59,154**	**$57,415**	**$60,523**	**$58,850**	**$62,474**	**$60,322**	**$240,088**	**$230,101**

Total Budget for Project $470,189

Detailed Budget by Activity

Example Project

(Project Budget Period)

Component	Category	319 Grant Federal Funds	Agencies Non-Federal Match	Volunteers Non-Federal Match	Citizens Non-Federal Match	Total Project Costs
Water Monitoring	Labor	7,030	13,015	9,967	0	30,012
	Expenses	3,754	0	0	0	3,754
Total		**10,784**	**13,015**	**9,967**	**0**	**33,766**
Action Planning	Labor	3,515	5,578	9,967	0	19,060
	Expenses	708	0	0	0	708
Total		**4,223**	**5,578**	**9,967**	**0**	**19,768**
Newsletter and Newspaper Articles	Labor	7,030	7,437	624	0	15,091
	Expenses	10,331	0	0	0	10,331
Total		**17,361**	**7,437**	**624**	**0**	**25,422**
Educational Presentations	Labor	3,515	11,156	500	0	15,171
	Expenses	818	0	0	0	818
Total		**4,333**	**11,156**	**500**	**0**	**15,989**
Watershed Appreciation Events	Labor	3,515	11,156	1,500	0	16,171
	Expenses	1,850	0	0	0	1,850
Total		**5,365**	**11,156**	**1,500**	**0**	**18,021**
Watershed Festivals	Labor	5,273	7,437	491	0	13,201
	Expenses	2,204	0	0	0	2,204
Total		**7,477**	**7,437**	**491**	**0**	**15,405**
Awards to Residents	Labor	1,771	0	0	0	1,771
	Expenses	813	0	0	0	813
Total		**2,584**	**0**	**0**	**0**	**2,584**
Stream Cleanups	Labor	3,515	0	2,800	0	6,315
	Expenses	708	0	0	0	708
Total		**4,223**	**0**	**2,800**	**0**	**7,023**
Stream Bank Stabilization	Labor	19,165	13,015	2,240	0	34,420
	Expenses	5,122	0	0	0	5,122
Total		**24,287**	**13,015**	**2,240**	**0**	**39,542**
Riparian Area Tree Planting	Labor	21,610	5,578	4,984	0	32,172
	Expenses	7,921	0	0	0	7,921
Total		**29,531**	**5,578**	**4,984**	**0**	**40,093**
Distribution of BMP Info	Labor	3,515	9,296	0	0	12,811
	Expenses	5,516	0	0	0	5,516
Total		**9,031**	**9,296**	**0**	**0**	**18,327**

Demonstration of BMPs	Labor	22,017	25,889	0	0	47,906
	Expenses	33,506		0	8,305	41,811
Total		**55,523**	**25,889**	**0**	**8,305**	89,717
Technical Assistance of BMPs	Labor	52,620	61,330	0	0	113,950
	Expenses	12,746	13,271	0	4,565	30,582
Total		**65,366**	**74,601**	**0**	**4,565**	**144,532**
Total Costs		**$240,088**	**$184,158**	**$33,073**	**$12,870**	**$470,189**

Labor includes Contractual Labor and Project Salaries/Fringe

Non-Federal	**$230,101**
319 Federal	**$240,088**
Total Budget	**$470,189**

Attachment D

Major Nonpoint Source (NPS) Categories and Subcategories

1000 Agriculture
- 1100 Non-irrigated Crop Production
- 1200 Irrigated Crop Production
- 1300 Specialty Crop Production (e.g. horticulture/citrus/nuts/fruits)
- 1350 Pasture Grazing
- 1400 Range Grazing
- 1700 Aquaculture

1600 Animal Feeding Operations

2000 Silviculture
- 2100 Harvesting/Residue Management
- 2200 Forest Management (e.g. pumped drainage/fertilization/pesticide application)
- 2300 Road Construction/Maintenance
- 2990 Reforestation

3000 Construction
- 3100 Highways, Roads, Bridges
- 3200 Land Development or Redevelopment

4000 Urban Runoff/Stormwater
- 4190 Municipal
- 4191 Commercial
- 4192 Residential (non-commercial automotive/pet waste/etc.)
- 4400 Illicit Connections/Illegal Hookups
- 4450 Dry Weather Flows
- 4500 Highway/Road/Bridge Runoff
- 4590 Post Development Erosion and Sedimentation
- 4650 Salt Storage Sites

5000 Resource Extraction
- 5100 Surface Mining
- 5200 Subsurface Mining
- 5290 Open Pit Mining
- 5300 Placer Mining
- 5400 Dredge Mining
- 5500 Petroleum Activities
- 5600 Mill Tailings
- 5700 Mine Tailings
- 5800 Abandoned Mine Drainage
- 5990 Sand/Gravel Mining

6000 Land Disposal/Storage/Treatment
- 6200 Wastewater
- 6300 Landfills
- 6350 Inappropriate Waste Disposal
- 6400 Industrial Land Management
- 6500 On-site/Decentralized Wastewater Treatment
- 6600 Hazardous Waste
- 6700 Septage Disposal
- 6800 Waste Storage/Storage Tank Leaks (above ground)
- 6900 Waste Storage/Storage Tank Leaks (underground)

7000 Hydrologic Modification
- 7100 Channelization
- 7190 Channel Erosion/Incision
- 7200 Dredging
- 7300 Dam Construction
- 7350 Upstream Impoundment
- 7400 Flow Regulations/Modification
- 7550 Other Habitat Modification
- 7600 Removal of Riparian Vegetation
- 7700 Streambank or shoreline Modification/Destabilization
- 7800 Drainage/Filling of Wetlands
- 7850 Groundwater Withdrawal

7900 Marinas and Recreational Boating
- 7990 Pumpouts
- 7991 Sanitary On-Vessel Discharges
- 7992 Other On-Vessel Discharges
- 7994 Boat Construction
- 7995 Boat Maintenance
- 7996 Shoreline Erosion
- 7997 Fueling
- 7998 Dredging

8500 Historical Pollutants
- 8590 Contaminated Sediments
- 8591 Clean Sediments
- 8592 Other Historical Pollutants

0000 All Sources listed Above

8000 Other NPS Pollution
- 8050 Erosion for Derelict Land
- 8100 Atmospheric Deposition
- 8400 Spills
- 8600 Natural Sources
- 8910 Groundwater Loadings
- 8950 Wildlife

8700 Turf Management
- 8700 Recreation and Tourism Activities
- 8710 Golf Courses
- 8790 Yard Maintenance
- 8791 Other Turf Management

Source: USEPA Grant Reporting and Tracking System Guidance, 2003.

Attachment E

Functional Category of Activity Pick List

Restoration/Protection/Prevention
010 Corrective Action (other than BMP implementation)
011 BMP Design/Implementation
012 BMP Performance Assessment
013 Animal Manure/Litter Management Projects
014 Livestock Control Projects
016 Vegetation Management/Revegetation
017 Stream Bank Stabilization
018 Grade Stabilization
019 Sediment Control
020 Stormwater Discharge Design/Control
021 Erosion Control Projects
022 Acquisition of Wetland Resources
023 Wetland Restoration/Protection
024 Acquisition of Riparian Resources
025 Riparian Projects
026 Fisheries Projects
027 Other Restoration/Protection/Prevention

Education/Information Programs
100 Statewide Education/Information Programs
600 Local (Specific Target)

Technical Assistance
200 Technical Assistance to State/Local
201 Nonpoint Source Program Overall Coordination/Management
202 Nonpoint Source Project Staffing
230 Technology Transfer to State/Local Government
290 Other Technical Assistance Activity

Regulatory/Enforcement
300 Certification Activities
310 Program Development Activities
320 Inspection Activities
330 Ordinance Development
340 Enforcement Activities

Planning
401 Nutrient Management Planning
402 Watershed Modeling Planning
403 Stormwater Management Planning
404 Watershed Restoration Action Strategy (WRAS)/Watershed Planning
410 Geographic Information Systems
420 Develop/Revise Basin Plans
430 TMDLs
440 Nonstructural Planning (for new development)
450 Livestock Grazing System Planning
490 Other Planning

Water Quality Assessment/Monitoring
501 In-stream Flow Assessments
502 Assessments for Compliance with Water Quality Standards
503 Wetland Assessment/Monitoring
504 Riparian Assessment/Monitoring
505 TMDL Assessments
510 Water Quality Trend Assessment
520 Water Quality Problem Identification
590 Other Water Quality Assessment/ Monitoring
600 BMP Effectiveness Monitoring
610 Biological Monitoring
620 Watershed Assessments

319(h) National Monitoring Project
800 319(h) National Monitoring Project

Other Activities
910 Groundwater (all groundwater activities)
920 Anti-degradation Activities and Analyses
930 Soil Analyses

Key Elements Critical to a Watershed Management Plan

Planning and development of watershed plans should be done in cooperation with local communities, soil and water conservation districts, agricultural producers, and other watershed stakeholders resulting in locally led partnerships to implement the plans. Any application for funding to implement a Watershed Management Plan must address the nine critical watershed elements as identified by the EPA in 2003.

EPA believes that these nine elements are critical to assure that public funds to address impaired waters are used effectively. (Appendix C of the May 1996 Nonpoint Source Guidance further discusses a "well-designed watershed implementation plan," which specifically discusses most of the elements listed below.)

a. An identification of the sources or groups of similar sources that will need to be controlled to achieve the load reductions estimated established in this watershed-based plan (and to achieve any other watershed goals identified in the watershed-based plan), as discussed in item (b) immediately below. Sources that need to be controlled should be identified at the significant subcategory level with estimates of the extent to which they are present in the watershed (e.g., X numbers of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation).
b. An estimate of the load reductions expected for these management measures described under paragraph (c) below (recognizing the natural variability and the difficulty in precisely predicting the performance of management measures over time). Estimates should be provided at the same level of as in item (a) above (e.g., the total load reduction expected for dairy cattle feedlots; row crops; or eroded streambanks).
c. A description of the nonpoint source management measures that will need to be implemented to achieve the load reductions estimated established under paragraph (b) above (as well as to achieve other watershed goals identified in this watershed-based plan), and an identification (using a map or a description) of the critical areas in which those measures will be needed to implement this plan.
d. An estimate of the sources of technical and financial assistance needed, the associated costs, and/or authorities that will be relied upon, to implement this plan. As sources of funding, States should consider the use of their 319 programs, State Revolving Funds, USDA's Environmental Quality Incentives Program and Conservation Reserve Program, and other relevant Federal, State, local and private funds that may be available to assist in implementing this plan.
e. An information/education component that will be used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.
f. A schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious.
g. A description of interim, measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented.
h. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards and, if not, the criteria for determining whether this watershed-based plan needs to be revised or, if a nonpoint source TMDL has been established, whether the nonpoint source TMDL needs to be revised.
i. A monitoring component to evaluate the effectiveness of the implementation efforts measured against the criteria established under item (h) immediately above.

319 Application Packet Assistance Sheet

(#'s in parenthesis refer to the Application Sheet Number)

319 Grant Application Packet –
http://www.dnr.mo.gov/env/wpp/nps/rfp/index.html

Missouri Nonpoint Source Management Plan
http://www.dnr.mo.gov/env/wpp/nps/mgmtplan/index.html

Missouri's Hydrologic Unit Codes (HUC) (#8)
http://outreach.missouri.edu/mowin/watersheds2/congressindex.html

Missouri's 303(d) of Impaired Waters (#14)
http://www.dnr.mo.gov/env/wpp/waterquality/303d.htm

Flowchart for Missouri Unified Watershed Assessment
http://www.cares.missouri.edu/mowiap/finalflow.html

HU Point Ranking for Restoration Priority
http://www.cares.missouri.edu/mowiap/hu_point_ranking_for_restoration.htm

Missouri Watershed Plans (#15)
http://outreach.missouri.edu/mowin/trainingwqmps/localplans.html

Ongoing Missouri Watershed Projects
http://www.cerc.usgs.gov/mowin/ongoing_projects/onindex.htm

AgNPS SALT Program Info
http://outreach.missouri.edu/mowin/agnpsalt/agnpsindex.html

Watershed Characteristics (#16)
Biotic Assessment of Missouri Basins
http://www.cares.missouri.edu/mowiap/biotic.htm

Missouri Watershed Restoration Schedule
http://www.cares.missouri.edu/mowiap/apndx4.html

303(d) Listed Missouri Waters
http://www.dnr.mo.gov/env/wpp/waterquality/303d.htm

Water Quality Problem (#17)
TMDL Information Sheets
http://www.dnr.mo.gov/env/wpp/tmdl/info/index.html

319 Nonpoint Source Implementation Grant Web site
http://www.dnr.mo.gov/env/wpp/nps/index.html

Pollutant(s) being addressed in Project (#18)
http://www.epa.gov/owow/nps/categories.html

STEPL (Spreadsheet Tool for Estimating Pollutant Load)
http://it.tetratech-ffx.com/stepl/

Nonpoint Source Category & Subcategory (#19)
http://www.epa.gov/owow/nps/categories.html

Missouri Department of Natural Resources, Water Protection Program Web Site
http://www.dnr.mo.gov/env/wpp/wp-index.html

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Waterbody	WBID	Yr	Size	U	P	Pollutant	Source	Dwnstrm Co	Upstrm Co	Downstream	Upstrm
Bear Cr.	9001	2002	2	Mi	M	Unknown	Kirksville Pt/NPS	Adair		22,62N,15W	26,62N,15W
Big Cr.	1250	1998	49	Mi	M	Sediment	Ag.NPS	Henry	Jackson	34,42N,27W	29,46N,30W
Big Muddy Cr.	436	1998	8	Mi	M	Sediment	Ag.NPS	Daviess		SE36,59N,27W	33,60N,27W
Big Otter Cr.	1224	1998	1	Mi	M	pH	Otter Creek AML	Henry	St. Clair	C29,40N,25W	NE31,40N,25W
Big Otter Cr. Trib.	1225	1998	1	Mi	M	pH	Otter Creek AML	St. Clair		NE31,40N,25W	N5,39N,25W
Big R.	2074	1998	53	Mi	H	Lead	Old Lead Belt AML	Jefferson		NW18,43N,4E	3166,40N,3E
Big R.	2080	1994	40	Mi	H	Lead,NVSS	Old Lead Belt AML	Jefferson	St. Francois	3166,40N,3E	33,37N,4E
Blackbird Cr.	653	1998	10.5	Mi	M	Sediment	Ag.NPS	Putnam		NW10,63N,16W	2,64N,17W
Cave Spring Br.	9002	1998	0.2	Mi	H	Nutrients	Simmons Ind.,Livestock	McDonald		W21,21N,34W	W21,21N,34W
Center Cr.	3203	1994	11	Mi	M	Zinc	Tristate AML	Jasper		W14,28N,34W	W5,28N,32W
Clear Cr.	1336	1994	18	Mi	M	Sediment	Ag.NPS	Vernon		10,35N,29W	29,34N,30W
Dardenne Cr.	221	2002	10	Mi	M	Unknown	Urban/Rural NPS	St. Charles		I-70	Hwy 40
Dark Cr.	690	1994	8	Mi	M	Sulfate	Crutchfield AML	Randolph		NE31,54N,15W	34,55N,15W
E. Fk. Medicine Cr.	619	1998	36	Mi	M	Sediment	Ag.NPS	Grundy	Mercer	9,61N,22W	26,67N,22W
E. Fk. Tebo Cr.	1282	1994	1	Mi	H	pH	Triple Tipple AML	Henry		C2,43N,24W	NW35,44N,24W
Edina Res.	7026	2002	51	Ac	H	Atrazine,Cyanazine	Corn&Sorgh.Production	Knox		NE12,62N,12W	
Fellows Lake	7237	1994	820	Ac	L	Nutrients	Ag.&Suburban NPS	Greene		NE22,30N,21W	
Flat Cr.	865	1998	20	Mi	M	Sediment	Ag.NPS	Pettis		18,45N,20W	2,43N,23W
Flat River Cr.	2168	1994	5	Mi	H	Lead,NVSS	Old Lead Belt AML	St. Francois		Sur.83,37,5E	NW18,36,5E
Flat River Cr.	2168	1994	5	Mi	M	Zinc	Elvins tailings pile	St. Francois		Sur.83,37,5E	NW18,36,5E
Honey Cr.	554	1998	23	Mi	M	Sediment	Ag,NPS	Livingston	Grundy	27,59N,24W	29,63N,23W
Honey Cr.	1251	1998	3	Mi	M	Sulfate	Reliant Shop AML	Henry		SW10,42N,27W	NE11,42N,27W
Indian Cr.	1946	2002	1.5	Mi.	H	Zinc	Viburnum Division Mine	Washington		mouth	18,35N,1W
L. Medicine Cr.	623	1998	40	Mi	M	Sediment	Ag.NPS	Grundy	Putnam	9,61N,22W	30,67N,22W
L. Osage R.	3652	1998		Mi	M	Low DO		Vernon		18,37N,31W	18,37N,33W
L. Sac R.	1381	1998	27	Mi	M	Fecal Coliform	Pt/NPS	Dade	Greene	2,32N,24W	NW34,30N,22W
L. Tarkio Cr.	248	1998	17.5	Mi	M	Sediment	Ag.NPS	Holt	Atchison	13,60N,40W	19,63N,39W
LaBelle #2 Lake	7023	1994	112	Ac	H	Atrazine,Cyanazine	Corn&Sorgh.Production	Lewis		NE16,61N,9W	
Lake Cr.	875	1998	5	Mi	M	Sediment	Ag.NPS	Pettis		SW25,45N,20W	NE12,44N,20W
Lake Ste. Louise	7055	2002	50	Ac	M	Fecal Coliform	Urban Runoff	St. Charles		28,47N,2E	
Lamar Lake	7356	1994	180	Ac	L	Nutrients	Ag.NPS	Barton		NW32,32N,30W	
Lat.#2 Main Ditch	3105	1998	11.5	Mi	M	Sediment	Ag.NPS	Stoddard		24,23N,10E	25,25N,10E
Lewistown Res.	7020	2002	27	Ac	H	Atrazine,Cyanazine	Corn&Sorgh.Production	Lewis		SW8,61N,8W	
M. Fk. Grand R.	468	1998	25	Mi	M	Sediment	Ag.NPS	Gentry	Worth	33,63N,31W	12,66N,31W
M. Fk. Salt R.	121	1998	49	Mi	M	Sediment	Ag.NPS	Monroe	Macon	9,54N,9W	16,56N,13W
Marmaton R.	1308	1998		Mi	M	Low DO		Vernon		19,38N,29W	W6,35N,33W

Waterbody	WBID	Yr	Size	U	P	Pollutant	Source	Dwnstrm Co	Upstrm Co	Downstream	Upstrm
Miami Cr.	1299	1998	18	Mi	M	Sediment	Ag.NPS	Bates		35,39N,31W	10,40N,32W
Mill Cr.	159	1998	4	Mi	M	Sediment	Ag.NPS	Lincoln		7,50N,1W	1710,51N,1W
Mississippi R.	1	2002	165	Mi	M	Chlordane, PCBs	Pt/NPS	St. Charles	Clark	Missouri R.	DesMoines R.
Mississippi R.	1707	2002	200.5	Mi	M	Chlordane, PCBs	Pt/NPS	Mississippi	St. Louis	Ohio R.	Missouri R.
Mississippi R.	3152	2002	124.5	Mi	M	Chlordane, PCBs	Pt/NPS	Pemiscot	Mississippi	State Line	Ohio R.
Missouri R.	226	2002	179	Mi	M	Chlordane, PCBs	Pt/NPS	Jackson	Atchison	Kansas R.	State Line
Missouri R.	356	2002	125	Mi	M	Chlordane, PCBs	Pt/NPS	Chariton	Jackson	Chariton R.	Kansas R.
Missouri R.	701	2002	129	Mi	M	Chlordane, PCBs	Pt/NPS	Gasconade	Chariton	Gasconade R.	Chariton R.
Missouri R.	1604	2002	100	Mi	M	Chlordane, PCBs	Pt/NPS	St.Louis	Gasconade	Mississisppi	Gasconade R.
Monegaw Cr.	1234	1998	3	Mi	M	Sulfate	Montee AML	St. Clair		SW21,39N,28W	NE8,39N,28W
Monroe City Rte.J Lake	7031	1996	94	Ac	H	Atrazine,Cyanazine	Corn&Sorgh.Production	Ralls		NE34,56N,7W	
Mussel Fk.	674	1998	29	Mi	M	Sediment	Ag.NPS	Macon	Sullivan	18,58N,17W	2,62N,18W
N. Fabius R.	56	1998	82	Mi	L	Sediment	Ag.NPS	Marion	Schuyler	24,59N,6W	26,67N,14W
N. Fk. Spring R.	3188	1998	51.5	Mi	M	Sediment	Ag.NPS	Jasper	Dade	1,29N,32W	20,30N,28W
Pearson Cr.	2373	1998	1.5	Mi	M	Unknown toxicity	Urban NPS	Greene		SE35,29N,21W	C26,29N,21W
Peruque Cr.	217	2002	4	Mi	M	NVSS	Urban/Rural NPS	St. Charles		SE32,47,2E	SE25,47,1E
Peruque Cr.	218	2002	8.5	Mi	M	NVSS	Urban/Rural NPS	St. Charles		SE25,47,1E	SE23,47,1W
River des Peres	9003	2002		Mi	M	Low DO	Urban NPS	St. Louis			
S. Fk. Blackwater R.	921	1998	5	Mi	M	Sediment		Johnson		12,46N,27W	19,46N,27W
S. Wyaconda R.	50	1998	9	Mi	M	Sediment	Ag.NPS	Clark	Scotland	26,65N,9.W	4,65N,10W
Salt R.	91	1998	29	Mi	L	Manganese	Cannon Dam	Ralls		SE23,55N,3W	NE9,55N,6W
Sewer Br.	9004	2002			M	Low DO	Unknown Pt/NPS	Pettis			
Shaw Br.	2170	1994	2	Mi	M	NVSS, Lead	Federal AML	St. Francois		NE7,36N,5E	SW20,36N,4E
Spillway Ditch	3134	1998	13.5	Mi	M	Sediment	Ag.NPS	New Madrid	Mississippi	29,23N,15E	33,25N,16E
Spring Fork Lake	7187	1994	178	Ac	L	Nutrients	Ag.NPS	Pettis		SW21,44N,21W	
Table Rock Res.	7313	2002	43100	Ac	L	Nutrients	Pt/NPS	Stone	Barry	NW22,22N,22W	
Third Fk. Platte R.	327	1998	31.5	Mi	M	Sediment	Ag.NPS	Buchanan	Gentry	SE34,57N,34W	25,61N,33W
Troublesome Cr.	73	1998	3.5	Mi	M	Sediment	Ag.NPS	Marion		NE24,59N,7W	15,59N,7W
Turkey Cr.	3216	2005	3.5	Mi	M	Zinc	Multiple Lead/Zinc AMLs	Jasper		SE29,28N,33W	35,28N,33W
Turkey Cr.	3217	2005	5	Mi	M	Zinc	Duenweg AML	Jasper		35,28N,33W	9,27N,32W
Vandalia Lake	7032	1998	37	Ac	H	Atrazine	Corn&Sorgh.Production	Pike		SE12,53N,5W	
Village Cr.	2864	1994	0.5	Mi	H	NVSS	Mine La Motte AML	Madison		SW34,34N,7E	C34,34N,7E
Wilson's Cr.	2375	1998	18	Mi	M	Unknown toxicity	Springfield Pt/NPS	Greene		SW1,27N,23W	29,29N,22W
Note: Big Otter Creek is meeting standards and will not need a TMDL.											
Tributary to Big Otter Creek TMDL and Trace Creek TMDL are presently waiting approval from EPA											

Waterbody	WBID	Yr	Size	U	P	Pollutant	Source	Dwnstrm Co	Upstrm Co	Downstream	Upstrm
The following unknown Pollutants are likely to be later found to be caused by Nonpoint Source Pollution.											
Hickory Cr.	442	2002	1.5	Mi	M	Unknown		Daviess		mouth	11,60N,28W
Hickory Cr. Trib.	589	2002	1	Mi	M	Unknown		Grundy		15,60N,25W	9,60N,25W
Hickory Cr..	588	2002	7	Mi	M	Unknown		Grundy		mouth	9,60N,25W
Hinkson Cr.	1007	1998	6	Mi	M	Unknown		Boone		mouth	W24,48N,13W
Hinkson Cr.	1008	1998	5	Mi	M	Unknown		Boone		W24,48N,13W	SW8,48N,12W
Long Branch	602	2002	13	Mi	M	Unknown		Linn		mouth	11,59N,20W
Long Branch	857	2002	3.5	Mi	M	Unknown		Pettis	Johnson	6,45N,23W	9,45N,24W
Muddy Cr.	557	2002		Mi	M	Unknown		Grundy	Mercer	Mouth	22,66N,23W
Sandy Cr.	652	2002	3	Mi	M	Unknown		Putnam		mouth	19,66N,17W
W. Fk. Locust Cr.	612	2002	17	Mi	M	Unknown		Linn	Sullivan	2,59N,21W	36,62N,21W
W. Fk. Locust Cr.	613	2002	17	Mi	M	Unknown		Sullivan		36,62N,21W	33,64N,21W
Willow Br.	9005	2002		Mi	M	Unknown		Putnam			
Definitions:											
Ag.NPS = Agricultural Nonpoint Sources											
AML = Abandoned Mine Land											
DO = Dissolved Oxygen											
NVSS = Nonvolatile Suspended Solids or soil, gravel or silt											
Pt/NPS = Point/Nonpoint Source											